

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): A driver circuit for an EL display panel comprising:

reference current generating means of generating a reference current;

a first current source which is fed the reference current from the reference current generating means and outputs a first current which corresponds to the reference current to a plurality of second current sources;

the second current sources which are fed the first current outputted from the first current source and output a second current which corresponds to the first current to a plurality of third current sources; and

the third current sources which are fed the second current outputted from the second current sources and output a third current which corresponds to the second current to a plurality of fourth current sources,

characterize in that among the fourth current sources, an appropriate number of unit current sources are selected according to input image data.

Claim 2 (New): A driver circuit for an EL display panel comprising:

a plurality of current generator circuits each of which includes unit transistors equal in number to a power of two;

switch circuits connected to the respective current generator circuits;

internal wiring connected to output terminals; and

a control circuit configured to turn on and off the switch circuits according to input data,

wherein a first end of each switch circuit is connected to the current generator circuit and a second end of each switch circuit is connected to the internal wiring.

Claim 3 (New): The driver circuit for an EL display panel according to claim 2,
wherein:

channel width W of the unit transistors is from 2 to 9 μm both inclusive, and
size (WL) of the transistors is 4 square μm or more.

Claim 4 (New): The driver circuit for an EL display panel according to claim 2,
wherein:

a ratio of channel length L to channel width W of the unit transistors is two or larger;
and
power supply voltage used is between 2.5 V and 9 V both inclusive.

Claim 5 (New): A driver circuit for an EL display panel comprising:

a first output current circuit including a plurality of unit transistors configured to pass
a first unit current;

a second output current circuit including a plurality of unit transistors configured to
pass a second unit current; and

an output stage configured to produce an output by adding an output current of the
first output current circuit and an output current of the second output current circuit,

wherein the first unit current is smaller than the second unit current,

the first output current circuit operates in a low gradation region and a high gradation
region according to gradations, and

the second output current circuit operates in the high gradation region according to
gradations, and output current values of the first output current circuit do not change in the
high gradation region when the second output current circuit operates.

Claim 6 (New): A driver circuit for an EL display panel comprising:
a programming current generator circuit including a plurality of unit transistors
corresponding to output terminals;
first transistors configured to generate a first reference current that defines a current
flowing through the unit transistors;
gate wiring connected to gate terminals of the plurality of first transistors; and
second and third transistors whose gate terminals are connected to the gate wiring and
that form current mirror circuits in conjunction with the first transistors,
wherein a second reference current is supplied to the second and third transistors.

Claim 7 (New): The driver circuit for an EL display panel according to claim 6,
further comprising:
a programming current generator circuit including a plurality of unit transistors
corresponding to output terminals;
a plurality of first transistors configured to form current mirror circuits in conjunction
with the unit transistors; and
a second transistor configured to generate a reference current flowing through the first
transistors,
wherein the reference current generated by the second transistor branches through the
plurality of first transistors.

Claim 8 (New): The driver circuit for an EL display panel according to claim 6,
wherein in a driver IC chip which includes the driver circuit, the third transistor is electrically

connected, in an area in which the first reference current supply wirings are placed, to two outermost placed wirings of the reference current supply wiring group placed in the area.

Claim 9 (New): The driver circuit for an EL display panel according to claim 7, wherein in a driver IC chip which includes the driver circuit, the third transistor is electrically connected, in an area in which the first reference current supply wirings are placed, to two outermost placed wirings of the reference current supply wiring group placed in the area.

Claim 10 (New): An EL display apparatus comprising:

a first substrate on which driver transistors are placed in a matrix and that contains a display area including EL elements formed corresponding to the driver transistors;

a source driver IC configured to apply a programming current or voltage to the driver transistors;

a first wiring formed on the first substrate located under the source driver IC;

a second wiring electrically connected to the first wiring and formed between the source driver IC and the display area; and

an anode wiring that branches from the second wiring and applies an anode voltage to pixels in the display area.

Claim 11 (New): The EL display apparatus according to claim 10, wherein the first wiring has a light shielding function.

Claim 12 (New): An EL display apparatus comprising:

a display area in which pixels with EL elements are formed in a matrix;

driver transistors configured to supply light-emitting current to the EL elements; and

a source driver circuit configured to supply programming current to the driver transistors,
wherein the driver transistors are P-channel transistors, and
transistors that generate the programming current in the source driver circuit are N-channel transistors.

Claim 13 (New): An EL display apparatus comprising:

a display area in which EL elements, driver transistors configured to supply light-emitting current to the EL elements, first switching elements configured to form paths between the driver transistors and the EL elements, and second switching elements configured to form paths between the driver transistors and source signal lines are formed in a matrix;

a first gate driver circuit configured to perform on/off control of the first switching elements;

a second gate driver circuit configured to perform on/off control of the second switching elements; and

a source driver circuit configured to supply programming current to the driver transistors,

wherein the driver transistors are P-channel transistors, and
transistors that generate the programming current in the source driver circuit are N-channel transistors.

Claim 14 (New): An EL display apparatus comprising:

EL elements;

-
- P-channel driver transistors configured to supply light-emitting current to the EL
- elements;
- switching transistors formed between the EL elements and the driver transistors;
- a source driver circuit configured to supply programming current; and
- gate driver circuits configured to keep the switching transistors off for two horizontal scanning periods or longer in one frame period.